**Before the**
**Federal Communications Commission**
**Washington, D.C. 20554**

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| Review of the Emergency Alert System | ) | EB Docket No. 04-296 |
| | ) | |
| | ) | |
| | ) | |

## COMMENTS OF HARRIS CORPORATION

Harris Corporation ("Harris") respectfully submits comments in response to the Federal Communications Commission's ("Commission") Notice of Proposed Rulemaking ("*NPRM*") in the above-captioned proceeding concerning the Commission's examination of the emergency alert system ("EAS") as an effective mechanism for warning the American public of an emergency.[1]

## I. Introduction and Summary

Harris is an international communications equipment company with four operating divisions that offer products and services in the microwave, broadcast, secure tactical radio, and government communications systems markets. Harris's Broadcast Communication Division is the world leader in digital solutions for television and radio broadcasting and has been at the forefront of the transition to digital television, supplying the majority of the digital television ("DTV") transmitters and encoders in the United States.

In addition, Harris is the only manufacturer to offer a complete line of AM and FM digital ready transmitters at all power levels. As a leader in digital radio, Harris is

[1] *In the Matter of Review of the Emergency Alert System,* Notice of Proposed Rulemaking, EB Docket No. 04-296, rel. August 12, 2004 (hereinafter "*NPRM*").

the first company in the world to offer its own high-definition ("HD") exciter and the first to incorporate correction and linearzation in the transmitter for FM HD radio, resulting in a more efficient transmission system and greater spectral purity. In addition, Harris is a leader in the development and sales of EAS encoding and de-coding equipment through its manufacturing and distribution of the Harris-Sage ENDEC product.

Harris, in concert with National Public Radio and Kenwood USA initiated the Tomorrow Radio project, a multi-year undertaking that tests and demonstrates new digital technologies and services capable of operating within the HD Radio system. A principal goal of Tomorrow Radio is to test multi-channel or "second audio" technology that could allow public radio stations to broadcast more programming and content using their existing spectrum.

Moreover, Harris has been actively involved in reviewing the current EAS system in the context of the Media Security and Reliability Council ("MSRC"). Harris chaired the Communications Infrastructure Security, Access and Restoration Committee of the first Media Security and Reliability Council and helped draft many of the best practice recommendations that emerged from MSRC I. Harris is committed to the MSRC process and is participating in MSRC II.

Harris commends the Commission for undertaking a review of the efficacy of the EAS system during this time of technological change. As the Commission noted, "we are in the midst of a digital television transition and digital radio transition and it is critical that Americans, regardless of location, have access to a viable and reliable emergency communications system."[2] In this regard, Harris urges the Commission to consider the following: 1) the Commission should coordinate the development of a digital

[2] *Id.*

transmission coding system using media common alert protocol ("MCAP"); 2) the Commission should ensure that the development of such a system be in the public domain; 3) the Commission should work with the consumer electronics industry to ensure that HD radio receivers and ATSC television receivers are designed to receive the codes and present the appropriate visual and aural displays; 4) State and local governmental entities should have access to the EAS system. This access should be mandated, not voluntary.

## II. The Commission should initiate and coordinate the development of a digital transmission coding system using MCAP.

The Commission is seeking comment on MSRC I's recommendation that the government should coordinate development of a MCAP. As the Commission noted, within the MSRC I framework, the Future Technologies and Digital Solutions Task Force ("MSRC Task Force") was tasked with identifying particular challenges and opportunities posed by digital technologies to the reliability of the communications infrastructure. The MSRC Task Force noted certain key weaknesses in the current EAS system. The most alarming weakness was the current EAS system's inability to interface with digital technologies. As such, the MSRC Task Force provided specific recommendations on how the EAS system can be leveraged, changed, or enhanced to take advantage of digital technologies as they apply to broadcast, cable and satellite television, and radio. The Task Force solicited and assembled information on existing efforts to pilot or use digital technologies in emergency messaging.

Specifically, the MSRC Task Force recommended that the MCAP should: 1) be designed to deliver emergency messages via digital networks; 2) flow over all methods of digital transport; 3) be received by all digital receivers; and, 4) be optimized for point-to-

multi-point networks and devices. The MSRC Task Force underscored the importance that key attributes of the MCAP should be addressability, scalability, interoperability and prioritizing.

As an active member of the Association Television Standards Committee ("ATSC"), Harris appreciates the complexities of a digital transmission and distribution system as well as the inherent advantages of MCAP. As such, Harris strongly supports the MSRC Task Force's recommendation that the Commission, in collaboration with the Department of Homeland Security and other relevant Federal agencies, should coordinate the development of such a standard. In this regard, the Commission would work with private sector industry organizations and develop standards and specifications for the carriage of MCAP on various media. The advantages of MCAP are significant. For instance, MCAP would enable the transmission of more data than the current EAS system and could support multi-lingual applications as well as applications for the hearing-impaired and visually-impaired. Indeed, MCAP could support public alerting but also public safety, first responders, and local and regional governmental communications.

If MCAP is properly adopted and deployed within digital broadcasting, alert messaging protocol can be inserted at the transmission point—not the program origination point. This is an important factor in multi-channel and centralized broadcast operations where the program origination point is often different and substantially distanced from the transmission location. Until MCAP transmission systems and MCAP enabled receivers are widely deployed, all program streams would have to be interrupted. Thus, Harris strongly supports the recommendation that the Commission initiate the development of MCAP, in coordination with the Department of Homeland Security and a

combination of industry groups, such as ATSC and the National Radio Systems Committee.

Implementing such a system enables the consumer electronics community to develop a family of personal warning devices similar to the weather alert radios on the market today and could be incorporated into PDAs, cellular telephones and other personal communications devices.

## III. MCAP should be standardized, non-proprietary and in the public domain.

MCAP should be standardized, non-proprietary and in the public domain. Intellectual property issues could stifle the development and deployment of a digital transmission coding system using MCAP. As the Commission knows, EAS coding was developed by several groups and adopted by the Commission in the early 1990's. However, one individual pursued intellectual property protection on the coding and was issued a patent. Any companies utilizing the coding to develop compatible transmission and distribution facilities were forced to pay royalties. In the context of developing standards for MCAP, Harris strongly urges the Commission to ensure that MCAP, or any such standard developed in the context of this *NPRM*, be standardized, non-proprietary and in the public domain.

## IV. HD radio receivers and ATSC digital television receivers should be designed to receive the codes and present the appropriate visual and aural displays.

The Commission seeks comments on what is needed to extend EAS obligations to digital broadcasting.[3] Harris would like to note that graphic display circuitry is integrated

[3] *Id*. at para. 30.

in the ATSC digital receivers. Similarly, textual displays are integrated in the HD radio receivers. As the *NPRM* noted, digital broadcast services have the ability to transmit more than one program stream on their assigned channel. Harris urges the Commission to require that digital broadcasters transmit EAS aural and visual messages on one such stream and force-tune all receivers within the alert area to that stream. Although there may be software changes that may be required to allow for the forced-display of the graphics and the forced change of program stream; such changes are not significant. In this regard, the Commission specifically asks whether IBOC receivers have the ability to be force-tuned. Currently, IBOC receivers do not have the ability to be force-tuned but manufacturers could make basic adjustments to the receivers to enable force-tuning.

## V. State and local emergency alerts should be mandated, not voluntary.

Harris agrees with those parties cited in the *NPRM* that assert that voluntary (as opposed to mandatory) participation in state and local EAS impairs the credibility of the entire EAS.[4] Indeed, it does not make sense to mandate participation only on a national level in a system that has "never issued a Presidential alert" and is used to deliver vital information about life-threatening local, state and regional events.[5] Harris agrees that the dissemination of emergency information is a critical and fundamental component of broadcasters' local public service obligations. Given the important role that an emergency communication system plays in local communities, mandating local broadcasters to transmit an emergency alert is consistent with public interest obligations. State, regional and local government should be obligated to

[4] *Id.* at para. 24.
[5] *Id.*

participate in the EAS system and must also be obligated to equip themselves with the necessary apparatus to originate EAS alert messages.

## VI. Conclusion

Whether we are contemplating a terrorist attack, such as the tragedy of September 11, 2001 or a natural disaster, such as the onslaught of hurricanes in Florida, the American public needs a technologically viable emergency communications system. In this regard, Harris urges the Commission, in coordination with the Department of Homeland Security and other federal agencies as well as industry organizations and the private sector, to initiate and coordinate the development of a digital transmission coding system using MCAP. In doing so, the Commission should ensure that the coding system is standardized, non-proprietary and part of the public domain. Moreover, the Commission should ensure that HD radio receivers and ATSC digital television receivers are designed to receive the codes and present the appropriate visual and aural displays. Finally, the Commission should ensure that regional, state and local alerts be mandated—a voluntary system simply does not serve the interest of the American public.

Respectfully submitted,

**HARRIS CORPORATION**

_____

Kwame A. Boakye, PhD.
Vice President & CTO
Harris Corporation
1025 W. NASA Blvd.
Melbourne, FL 32919
(321) 727-9119

October 28, 2004